Pushing the Envelope			
2004 Science			
Curriculum Frameworks			
Connecticut Science			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Physics and Math (pgs. 43-63)	CT	SCI.7.	Students understand that energy provides the ability to do work and can exist in many forms: Work is the process of making objects move through the application of force.
Physics and Math (pgs. 43-63)	CT	SCI.7.A.7.1.C 12	Students understand that energy provides the ability to do work and can exist in many forms. Students are able to explain the relationship among force, distance and work, and use the relationship (W=F x D) to calculate work done in lifting heavy objects.
Rocket Activity (pgs. 69-75)	CT	SCI.7.	Students understand that energy provides the ability to do work and can exist in many forms: Work is the process of making objects move through the application of force.
Rocket Activity (pgs. 69-75)	CT	SCI.7.A.7.1.C 12	Students understand that energy provides the ability to do work and can exist in many forms. Students are able to explain the relationship among force, distance and work, and use the relationship (W=F x D) to calculate work done in lifting heavy objects.
Pushing the Envelope			
2004 Science			
Curriculum Frameworks			
Connecticut Science			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Types of Engines (pgs. 11-23)	CT	SCI.8.	Students understand that an object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion: The motion of an object can be described by its position, direction of motion and speed.
Types of Engines (pgs. 11-23)	CT	SCI.8.	Students understand that an object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion: An unbalanced force acting on an object changes its speed and/or direction of motion.
Types of Engines (pgs. 11-23)	CT	SCI.8.A.8.1.C 22	Students understand that an object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion. Students are able to: Calculate the average speed of a moving object and illustrate the motion of objects in graphs of distance over time.

Physics and Math (pgs. 43-63)	CT	SCI.8.	Students understand that an object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion:An unbalanced force acting on an object changes its speed and/or direction of motion.
Physics and Math (pgs. 43-63)	CT	SCI.8.A.8.1.C 23	Students understand that an object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion. Students are able to:Describe the qualitative relationships among force, mass and changes in motion.
Rocket Activity (pgs. 69-75)	CT	SCI.8.	Students understand that an object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion: An unbalanced force acting on an object changes its speed and/or direction of motion.
Rocket Activity (pgs. 69-75)	CT	SCI.8.A.8.1.C 23	Students understand that an object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion. Students are able to:Describe the qualitative relationships among force, mass and changes in motion.
Pushing the Envelope			
2004 Science			
Curriculum Frameworks			
Connecticut Science			
Grades 9-12			
Activity/Lesson	**State**	**Standards**	
Types of Engines (pgs. 11-23)	CT	SCI.9-12.P.1.1.2	Newton's laws predict the motion of most objects: The law F = ma is used to solve motion problems that involve constant forces.
Types of Engines (pgs. 11-23)	CT	SCI.9-12.P.2.1.3	The laws of conservation of energy and momentum provide a way to predict and describe the movement of object: Momentum is calculated as the product mv.
Chemistry (pgs. 25-41)	CT	SCI.9-12.P.3.1.3	The internal energy of an object includes the energy of random motion of the object's atoms and molecules. The greater the temperature of the object, the greater the energy of motion of the atoms and molecules that make up the object.
Physics and Math (pgs. 43-63)	CT	SCI.9-12.P.1.1.2	Newton's laws predict the motion of most objects: The law F = ma is used to solve motion problems that involve constant forces.
Physics and Math (pgs. 43-63)	CT	SCI.9-12.P.1.1.3	Newton's laws predict the motion of most objects: When one object exerts a force on a second object, the second object always exerts a force of equal magnitude and in the opposite direction.

Physics and Math (pgs. 43-63)	CT	SCI.9-12.P.1.1.4	Newton's laws predict the motion of most objects: Applying a force to an object perpendicular to the direction of its motion causes the object to change direction.
Physics and Math (pgs. 43-63)	CT	SCI.9-12.P.1.1.6	Newton's laws predict the motion of most objects: Newton's laws are not exact, but provide very good approximations unless an object is small enough that quantum effects become important.
Physics and Math (pgs. 43-63)	CT	SCI.9-12.P.2.1.5	The laws of conservation of energy and momentum provide a way to predict and describe the movement of object: An unbalanced force on an object produces a change in its momentum.
Rocket Activity (pgs. 69-75)	CT	SCI.9-12.P.1.1.2	Newton's laws predict the motion of most objects: The law F = ma is used to solve motion problems that involve constant forces.
Rocket Activity (pgs. 69-75)	CT	SCI.9-12.P.1.1.4	Newton's laws predict the motion of most objects: Applying a force to an object perpendicular to the direction of its motion causes the object to change direction.
Rocket Activity (pgs. 69-75)	CT	SCI.9-12.P.1.1.6	Newton's laws predict the motion of most objects: Newton's laws are not exact, but provide very good approximations unless an object is small enough that quantum effects become important.
Rocket Activity (pgs. 69-75)	CT	SCI.9-12.P.2.1.5	The laws of conservation of energy and momentum provide a way to predict and describe the movement of object: An unbalanced force on an object produces a change in its momentum.